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AUTHOR Gil, Ana; Quinones, Angel
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ABSTRACT

This qualitative study explored the use of listservs as instructional instruments in a graduate-level leadership program at a Midwestern university. Nineteen graduate students, none of whom had prior training in using e-mail or listservs, participated in the semester-long project in which students were required to respond to assigned case studies using a listserv. An assessment instrument was designed to control, record, and supervise students' responses and interactions. At the end of the semester, a structured, open-ended five-item questionnaire containing statements that elicited written answers was administered to the students. Subjects expressed ideas, feelings, opinions, and suggestions about the use of listservs. The study presents the pros and cons of listserv use and concludes that listservs provide students with exposure to diverse forms of written expression and also help them become aware of new ways of thinking and processing ideas. Listservs provide alternatives to classroom instruction and prepare students for more demanding and complex computerized remote learning experiences such as web courses. (Contains 10 references.) (CH)

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Ana Gil & Angel Quiñones
Northeastern Illinois University
Chicago, USA

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The Use of the Listserv as an Instructional Tool in Higher Education Classrooms

Ana Gil and Angel Quinones
Northeastern Illinois University
Chicago, USA

Abstract

In this qualitative research, we explore the use of listserves as instructional instruments at the graduate level, in a school leadership program, at a midwestern university. An open-ended 5-items questionnaire containing statements that elicited written answers was constructed, face and content validated. Twenty -five graduate students, including some who have never used a computer-based technology programs before. In their responses, subjects expressed their ideas, feelings, opinions, and suggestions about the use of the listserv. The researchers used the information collected to obtain new insights and determine the usefulness of such a tool in the classroom. Respondents input, as well as the available journalistic literature in the field, agree that the listserves are viable classroom instructional tools that, if used appropriately, can expand the learning experiences and broaden the attitudes of all users. The study presents the pros and cons of the listserv use, as well as anecdotal experiences of students who used this educational tool for the first time.

The study concludes that listserves, not only provide mainstream American students' exposure to diverse ways and forms of written expression, but also help them become aware of new ways of thinking and processing of ideas. Among those are customs, idiomatic expressions, cultures, psyches, and idiosyncrasies of other students, who take similar classes simultaneously. Students who use listserves can get in touch and exchange ideas with others in their own or other educational institutions across their own cities, states or across world countries. Students can learn to share ideas about specific topics or areas of study provided by teachers, becoming more tolerant of opposing points of view. Listserves provide alternatives to classroom instruction and can prepare students in more demanding and complex remote learning computerized learning experiences i.e. web courses, in the future.

Few would disagree that the technology has a profound effect on the academic side. Like the industrial revolution, the technical revolution brought a dramatic shift in the way we live, perceive the world around us, and perhaps even the way we think. We all are aware that technological advances which include instructional services, audiovisual aids, internet applications, freenets, multiple softwares, diverse hardware, have drastically changed our teaching manners. The impact of technology in the classroom has been on the top of the academic discourse for long time. Technological literacy, for instance, is of vital importance to students, affecting how they learn, how they conduct their future lives, and what type of employment opportunities they will have. The academic profession is now being challenged by the latest technology forcing curriculum changes and enhancement. University professors are increasingly integrating technology into their teaching to actively involve students, help them to view knowledge in relational ways, guide them

into higher-level thinking, inspire them to carry out in-depth research, and enhance their social skills.

Technology in the Classroom

The power of the use of modern technology to transform education has been recognized by educators, school administrators, legislators, and general public. The use of technology in the classrooms is identified as one of the most powerful change agent in curriculum development and the role of the teacher.

The existing and emerging technology, in particular Internet connections, World Wide Web, CD roms, videodisc technology, multimedia, computer networks, and satellite technology demands the human willingness to provide the proper support system. In academic environments the teacher is the human component of the nomothetic-ideographic equation who would be the primary backbone supporting the technological condition of any social open system.

Donna Harrington-Luecker (1997) listed five suggestions for technology planning in school settings: (1) don't expect change overnight; (2) start small; (3) pay attention to equity; (4) invest in the early grades; and (5) make teachers' needs a top priority. These suggestions can also be transferred into higher education classrooms. Technology takes time to digest and it must be taken as part of the classroom in order to gradually transform instruction. When faculty experiment with technological artifacts, for instance, the presence of the tool, i.e., computers, intimidate and create an immediate resistance. In fact, this resistance seems to be related to the lack of environmental dominion, feeling of disempowerment, and immediate frustrations which oblige them to stay away from what they perceive as uncontrolling forces. At the beginning of any technological enterprise, small organized steps would work more effectively in the classroom than suddenly inflicting a frightening instructional technological plan. Rogers's (1983) general theory of diffusion of innovations and Markus's (1987) critical mass theory of media adoption have influenced research on the adoption and use of different forms of communication. The diffusion of innovations theory alludes that when adopting an innovative approach early users see the benefit of it (in our case, listserv), and others follow suit to stay competitive or are persuaded to adopt the innovation by significant. Critical mass theory mentions that utilizing an interactive medium "is beneficial only given a sufficient number of innovators and assurance of universal access to interactive media" (Thomas, Clift, & Sugimoto, 1996, p. 166). It seems that the users can develop more efficient

connection and familiarity with the innovation and interdependence among them may develop over time.

Short, Williams, and Christie (1976) as well as Fulk, Steinfield, Schmitz, and Power (1987) suggested that individuals select the type of communication to be used in particular situations based on such aspects as social presence which refers to the extent to which the medium allows the user to feel a degree of personalization, sociability, warmth, and sensitivity from the partner(s) in communication. Other researchers have included the richness of the medium seeing it as the extent to which media are able to bridge different frames of reference, make issues less ambiguous, or provide opportunities for learning in a given time interval, based on the medium's capacity for immediate feedback, the number of cues and senses involved, personalization, and language variety (Trevino, Lengel, & Daft, 1987; Daft & Lengel, 1986; Rice, 1993). Both definitions, social presence and richness of the medium, establish that individuals perceive, feel, and process experiences with the medium in distinctive ways. If the individual who is interacting with the medium makes sense of his experience, then his response to the situation is understood as significant. Also, the richness aspect of this interaction is more valued and personally rewarding in which the learning process becomes more powerful.

University faculty who use instructional technology often find that traditional university work is valued more highly than technology-based projects. Research studies have shown that college faculty believe they are unprepared to use instructional technology in their course instruction (Brooks &Kopp, 1989; Roblyer & Barron, 1993). Also, faculty have generally not yet adopted the systematic use of technology for the delivery of instruction because many are ill prepared and not consistently using technology in their coursework (Taylor, 1994). In 1994, Seminoff and Wepner cited three barriers affecting college professors participation in technology-based work. They reported that 80% had limited knowledge about how to present technology-based material in a scholarly manner, 49% lacked of reassigned time from teaching responsibilities to develop technology-based work, and 45% lacked of expertise in using technology. Due to research findings as mentioned, there have been serious attempts to create national and state guidelines providing directions to colleges of education to include technology provisions which may impact university faculty personnel policies in regard to the development and use of technology and information systems. With these new expectations for technology proficiency, university faculty may increasingly require updated training, more sophisticated personal computers,

hardware, software, connectivity, and state-of-the-art instructional laboratories.

Pamela Taylor and Wesley Little (1996) designed a benchmark list to assist faculty knowledge, skill, and ability in integrating technology in their daily work. Some aspects considered were (1) requirement that students work collaboratively to make group presentations using technology, (2) requirement that students word process all final coursework, (3) ability to use computer-assisted instruction as an alternative instructional delivery medium, (4) ability to use teacher utility tools for grading record keeping, and test generation, ability to master basic instructional technology skills in the area of productivity, multimedia, telecommunication, and classroom integration (p.220).

Context of Study

Nineteen students participated in this semester long project. All students understood that their coursework would require them to be subscribed and to be using a listserv regularly. They had no prior training in neither e-mail nor listserv interaction. The courses of LEAD 429 Research in Educational Leadership and LEAD 421 Foundations of Educational Leadership are the units of analysis of this study. In this qualitative study, we examined the potential of combining teaching cases (instructional technique) with telecommunications technology (listserv) to stimulate learning communities comprised of experienced teachers. During the Spring semester of 1999, the courses met intensively for approximately 14 weeks, after which students were assigned case studies to be responded in the EDFN429-L and EDFN421-L listserves.

Graduate students represented in the School Leadership program include teachers from public and parochial schools. Many of these graduate students lacked basic knowledge in instructional technology and elemental information on e-mail interaction to benefit fully from advanced technological curriculum infusions. In the recent past, the instructor has attempted to introduce the students to the simple use of e-mail. Training was provided and the access to open an e-mail account was facilitated. All students had free electronic mail accounts and were linked to the Internet through the university mainframe computers. They received the e-mail addresses of the other participants and could simultaneously send e-mail to all of them. The instructor taught students how to use e-mail and encouraged them to communicate with peers, professors, or anyone else by electronic mail. It is fair to say that the students did not feel the same enthusiasm for the potential use in the class as the instructor did. She insisted in using the electronic mail for

basic communication of diverse educational issues and or course directions. The syllabus included a statement which said: *The E-mail, or electronic mail is fundamentally the same as paper-based communication, but due to the turnaround time, E-mail is more "conversational" than paper communications. If you do not have an E-mail account, you will need to get one. If you do not know how to use E-mail, this course requires to attend one of the E-mail workshops scheduled by the Academic Computing Services during this term. It is expected that you make your own arrangements to learn to use the e-mail system, listserv, and or distribution lists.* Like other instructional technique, the e-mail became an instructional tool and an assessment piece of the course.

In trying to convert the classes as learning units, the instructor planned and organized a more aggressive plan for computer user recruitment. It consisted of incorporating in both syllabi assessment plans the use of the listserves as instructional tool for all graduate students in which they were encouraged to communicate about specific case studies and educational situations, and other topics of common interest. An example of the statement embodied in the syllabi of LEAD 429 and LEAD 421 quoted: *The student is responsible for subscribing and participating on the listserv EDFN429-L. The discussion on the listserv will be based on articles selected by the instructor. The instructor will initiate the discussion and keep track of the number of times you have participated and interacted in the listserv. There will be a minimum of 5 interactions during the semester. Please make sure that you discuss only the research article suggested. Any discussion outside the topic will not count for your grade.* Interacting in the listserv would hold students responsible and accountable for accessing class assignments on-time and on-line.

The students were given two weeks to obtain their e-mail accounts and to subscribe to the listserves in their respective courses. To avoid the socioemotional character of student-teacher messages found in earlier research, the instructor overstructured the listserv interactive environment. The students's messages were heavily assignment oriented. They were required to send a response to the case posted and at least two reactive interactions with other classmates. The listserv assignment had specific deadlines to which the subjects had to pay attention in order to receive the grade given for having participating in the listserves. An assessment instrument was designed to control, record, and supervise the students 's responses and interactions. Each case or situation selected for discussion was related to the content to be taught in the regular face-to-face class meetings. Given the interaction expected, the course topics expanded on issues such as

schooi administration, conflict resolution, decision making, organizational culture and climate, leadership issues, legal aspects of school life, etc.

Data Collection

The instrument "Listserv: A tool for Instruction" used for the purpose of data collection was designed by the researchers. It was face validated and corrections were made before administering it. The five-items structured questionnaire asked the following questions: (1) Describe your feelings about the use of the listserv in the classroom prior to starting participating in it, (2) What do you think about the usefulness of the listserv as an instructional tool?, (3) List the three most important advantages and three disadvantages in your opinion regarding the use of the listserv in the classroom, (4) The listserv provides an electronic worspace for collaborative work and the sharing of ideas. Do you agree or disagree with this statement? Explain., and (5) How ready do you think you are to register and attend an online interactive course (web-based or web-enhanced)? Explain. The instrument was given at the end of the semester. It was sent electronically to both listserves. The students had the option of either answering it individually or placing their responses to be known by other subscribers. Most students (65%) e-mailed their responses. Another group preferred to answer a paper copy and then keep the confidentiality and anonymity.

Analysis of Opinions

The formation of five categories resulted from the analysis of the students' opinions. Each instrument analyzed, regardless of length or content, represents a unit of analysis. The categories are:

- Course Related
- Personal
- Instructional
- Innovative
- Technological Readiness

Following is a Table 1 which reports the categories and descriptions.

Table 1

Categories of Students' Opinions

Category	Description
Course Related	Responding research and leadership cases allowed the expansion of knowledge on the subjects discussed
Personal	Reacting to cultural differences, controversial issues, wishing good day to all subscribers
Instructional	Connecting information to course content and other methodological applications occurring in the classroom
Innovative	Reaffirming the satisfaction level of using this type of communication and the collaborative work created
Technological Readiness	Feeling ready to register and attend future courses offered in the web or using any other technological tool

Meeting Task Demands

In many ways, the context in which learning occurs is crucial to motivate the learner. People learn more effectively when they are learning about something that they are interested in, that they already know about, and that affords them the opportunity to use what they already know to figure out new things. Our findings are gathered in Table 2.

Table 2

Summary of Listserv: Tool for Instruction Survey Findings

Item Description	General Opinion
Describe your feelings about the use of the listserv in the classroom prior to starting participating in it.	I was very interested in the prospect of doing part of the course online because I am interested in online learning
What do you think about the usefulness of the listserv as an instructional tool?	I found the listserv an excellent learning tool

List the three most important advantages and three disadvantages in your opinion regarding the use of the listserv in the classroom	Advantages: • To think about questions at my leisure and respond accordingly • To ascertain the thoughts and positions of my classmates • Stimulated out of class discussions between myself and classmates • To provide a means to communicate with many people at one time • To incorporate technology into the course Disadvantages: • Classmates were repetitious and numerous • Too many people to respond-overwhelming • Not integrated 100% into all classroom activities As long as the system is available, it has more advantages than disadvantages
The listserv provides an electronic workspace for collaborative work and the sharing of ideas. Do you agree or disagree with this statement?	Yes, I agree that • It does provide an electronic work for collaborative work • It is a tool on the information highway that opens the exchange of ideas
How ready do you think you are to register and attend an online interactive course (web-based or web-enhanced)?	• Although I think I would prefer the regular teaching format, I would be ready to try an online course • I am ready. I love being on-line and using e-mail • I am very ready t sign up for any web-based course that is being offered

Electronic communication can provide a communication bridge that increases the frequency of interactions among students. Individuals vary. Therefore, positive and negative responses can be found according to the degree of satisfaction and technological aptitudes some individuals present. Table 3 reveals the percentages of positive and negative responses given by th subjects to each itm of the questionnaire.

Table 3

Summary of Responses

Item	Positive	Negative
Feelings about the listserv	58%	34%
Usefulness of the listserv	79%	21%
Advantages & Disadvantages	76%	24%
Electronic workspace	84%	16%
Ready to take web-courses	47%	53%

The table shows evidence of the positive and negative aspects of the listserv as an instructional tool in the higher education classroom where it was implemented. There were surprises in the reactions of the students regarding their feelings prior to being exposed to this technology. Most of them were willing to take risks and did not report reluctance connected to the newness of the tool and their inexperience with telecommunications. Even more important findings represented those related to the usefulness, advantages and electronic workspace. Most students agreed with the fact that electronic communication tools facilitate the creation of active social contexts in which professional conversation leads to professional growth. There still are some resistances to fully engaged in web-based courses. The face-to-face communication with the teacher is still highly valued and wanted.

Gains from Current Experience

Several important issues emerged from this research experience:

- Students showed an increased interest and awareness in technology use.
- The classroom climate fostered motivation.
- Trust and confidence in the use of listserv as a tool for immediate communication.
- Respect for others' opinions.
- The provision of easy access to updated information about course content and methods.
- Awareness and willingness of trying new ways of learning through web-based courses.

- The instructional conversation's elements of structure (content, bases for statements) and openess (general participation, responsiveness to student contributions, focus on complex issues) may provide a systematic way of thinking about the listserv dialogue and its use to create ongoing discourses in education.
- The listserv can support ongoing interaction only if the educational and social construction is open and less structured.

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